*Eichhornia crassipes* is notorious as the world's worst aquatic weed, and here we present all aspects of its biology, ecology and invasion behaviour within the framework of the new series of *Botany Letters* on *Monographs on invasive plants in Europe*. Native to the Amazon in South America, the plant has been spread around the world since the late 1800s through the ornamental plant trade due to its attractive lilac flowers, and is established on every continent except Antarctica. Its distribution is limited in Europe to the warmer southern regions by cold winter temperatures, but it has extensive ecological and socio-economic impacts where it invades. Its reproductive behaviour, characterised by rapid vegetative spread and high seed production, as well as its wide physiological tolerance, allows it to proliferate rapidly and persist in a wide range of environments. It has recently been regulated by the EU, under Regulation No. 1143/2014, which states that *E. crassipes* shall not be brought into the territory of the Union, kept, bred or transported to, from or within the Union. However, in the absence of effective control measures, such as herbicidal and biological control, it will continue to be a significant threat to European waterways, particularly in eutrophic waters, and under future climate change scenarios.

